

Attorney Docket No.: 016252-002110US (AF-0019)
Inventors: Graham et al.
Serial No.: 10/032,658
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REMARKS/ARGUMENTS

Claims 36 through 49 and 78 through 81 are pending in the instant application. Claims 36-41, 43-49 and 78-81 have been rejected. Claim 42 has been objected to. Claims 36 and 78 have been amended. Support for these amendments is provided in the specification in the sequence of YL-1 (SEQ ID NO:11). Claim 37 has been canceled and the dependency of claim 38 has been amended in light of the cancellation of claim 37. No new matter is added by these amendments. Reconsideration is respectfully requested in light of these amendments and the following remarks.

I. Objection to Drawings

The drawings submitted May 5, 2003 have been objected to. Specifically Figure 6 is objected to as the views are not labeled separately or properly. Thus, in an earnest effort to advance the prosecution of this case, Applicants are providing herewith a substitute copy of Figure 6 with the views properly labeled with A, B and C.

Withdrawal of this objection is therefore respectfully requested.

II. Objection to Claims 36 and 78

Claims 36 and 78 have been objected to for recitation of the

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phrase "antifreeze protein of YL-1 (SEQ ID NO:11)". Thus, in accordance with the Examiner's suggestion, Applicants have amended these claims to state "antifreeze protein YL-1 (SEQ ID NO:11)". Withdrawal of this objection is therefore respectfully requested.

III. Rejection of Claims 36-41, 43-49 and 78-81 under 35 U.S.C. § 112, first paragraph

The rejection of claims 36-41, 43-49 and 78-81 under 35 U.S.C. § 112, first paragraph, has been maintained for reasons of record in Paper No. 9, mailed 12/3/2002. Specifically, the Examiner suggests that the specification is not enabling for any antifreeze protein which has at least 70% sequence identity to the polypeptide of SEQ ID NO:11. However, the Examiner has acknowledged that this rejection may be obviated by incorporating structural limitations in claim 38, with respect to the number of repeats of the motif set of SEQ ID NO:1, into claims 36 and 78.

Thus, in an earnest effort to advance the prosecution of this case, Applicants have amended claims 36 and 78 to state that the antifreeze protein comprises at least 4 repeats of the 12 contiguous amino acid motif set forth in SEQ ID NO:1. Support for this amendment is provided in the specification in YL-1 (SEQ

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ID NO:11) which shows 4 repeats. An upper limit on the number of repeating motifs is not required since a molecular weight range inclusive of an upper motif repeat limit for the protein is already set forth in the claims. See page 40, lines 13-14, wherein it is taught that the number of motif repeats is responsible for differences in molecular weight.

Inclusion of this structural limitation as suggested by the Examiner into claims 36 and 78 obviates this rejection.

Claim 37 has been canceled in light of the amendments to claim 36. The dependency of claim 38 has also been amended in light of the cancellation of claim 37.

In an earnest effort to present the claimed invention in the clearest and most definite manner, Applicants have also amended claims 36 and 78 by deleting part (vi) relating to antibody specificity. Support for this amendment can be found in claim 9 as originally presented, which contained the term "or", thus making clear that antibody specificity was merely one of several alternative characteristics of the claimed protein.

Accordingly, no new matter is added by these amendments and entry is respectfully requested.

Withdrawal of this rejection under 35 U.S.C. § 112, first paragraph is respectfully requested in light of these claim

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amendments.

IV. Objection to Claim 42

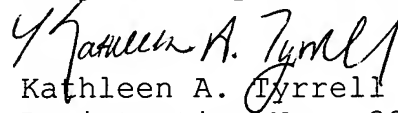
The Examiner has acknowledged claim 42 to be allowable over the prior art but has objected to this claim as it depends on rejected claim 36. As discussed in Section III, *supra*, claim 36 has been amended to obviate all rejections. Thus, withdrawal of any objections to claim 42 as being dependent upon a rejected claim is respectfully requested.

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V. Conclusion

Applicants believe that the foregoing comprises a full and complete response to the Office Action of record. Accordingly, favorable reconsideration and subsequent allowance of the pending claims is earnestly solicited.

Respectfully submitted,


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Date: October 15, 2003

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